

Montana Department of Natural Resources and Conservation  
Water Resources Division  
Water Rights Bureau

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

1. *Applicant/Contact name and address:* Duane Ullman
2. *Type of action:* Application to Change a Water Right—Additional Stock Tanks  
42M 30159218
- 3.
4. *Water source name:* Groundwater

5. *Location affected by project:* Section 20 and 29, T20N, R60E, Richland County.

6. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

The proposed change is to add five additional stock tanks to Statement of Claim 42M 30133536. The point of diversion and one existing stock tank are located in SWNWNE Sec 29, T20N, R60E, Richland County. The five additional stock tanks are in:

Two tanks in NENWSE Sec 29, T20N, R60E, Richland County  
One tank in SWSWSE Sec 20, T20N, R60E, Richland County  
Two tanks in NWSWNE, Sec 20, T20N, R60E, Richland County

If approved, a total of one well and six stock tanks will be included in the system. Maximum diversion of the historic use is 25 GPM and 4.03 AF, which will remain the same under the change authorization. The applicant historically runs 120 cow-calf pairs; the proposed action would ensure reliable livestock water supply as well as improve grazing management.

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402, MCA are met.

7. *Agencies consulted during preparation of the Environmental Assessment:*

Montana Department of Natural Resources and Conservation (DNRC)  
Montana Natural Heritage Program website  
USDA Web Soil Survey  
National Wetlands Inventory website

**Part II. Environmental Review**

1. **Environmental Impact Checklist:**

## PHYSICAL ENVIRONMENT

### **WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The proposed project is within DNRC Basin 42M, Yellowstone River below Powder River. Water is diverted through a well 135 ft deep, with the static water level at 35 ft. The flow rate and volume of the appropriation is 25 GPM and 4.03 AF. The applicant has been watering 120 cow-calf pairs from the well and one stock tank since 1969. Adding five tanks will not expand the animal units, flow rate and the volume.

In this semi-arid region of eastern Montana, surface channels are predominantly ephemeral streams—streams which flow in response to snowmelt and precipitation events. Therefore, the well is not expected to disrupt adjacent surface water flows.

*Determination:* No significant impacts.

**Water quality** - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The proposed project is a groundwater appropriation. The project involves an existing well which delivers water to stock tanks via pipelines. The Yellowstone River is 9 miles to the west. The project is not expected to impact surface water quality.

*Determination:* No significant impacts.

**Groundwater** - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

According to the Richland County Water Resources Survey, the aquifer underlying the project site is the Fort Union aquifer of the Tertiary period. Groundwater quality of the Fort Union aquifer is characterized by elevated alkalinity and salinity within suitable level for livestock consumption. On the surface, the place of use drains to an unnamed upper tributary of Shadwell Creek, which makes its way into the Yellowstone River about 9 miles northwest.

The applicant has been watering 120 cow-calf pairs from an existing well and one stock tank since 1969. Since the applicant will not increase volume and flow rate, nor change purpose of use, the addition of two stock tanks is not expected to impact groundwater quality or supply.

The beneficial use of the water right is livestock. With the addition of two stock tanks, the applicant will be able to rotate the animals and manage grazing distribution more effectively, which in turn would benefit vegetation, soil health, wildlife, and water quality.

*Determination:* No significant impacts.

**DIVERSION WORKS** - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The point of diversion is a well located in SWNWNE Sec 29, T20N, R60E, Richland County. The well was completed to a depth of 135 feet, with a static water level of 35 ft. Diversion is accomplished with a 3/4 HP submersible pump, supplying the existing 1000-gallon tank adjacent to the well.

The proposed change adds a southern pipeline which runs 1,800 feet south to two added tanks, each 1000-gallon capacity. The pipeline is a 1.25-inch HDPE pipe buried 7 feet.

The proposed change also adds a northern line running approx. 900 feet north to a T-junction, from which a line branches 500 feet west to serve one 1000-gallon tank. From the T-junction, the added line continues 3,500 feet north to serve two 2000-gallon tanks. A 50-feet diameter circular corral surrounds the two stock tanks, with three gates for the applicant to manage the cattle's access. NRCS approved the design of the pipeline system. All tanks have a ball valve and float switch assembly.

*Determination:* No significant impacts.

**UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The major land use in the project area has been livestock. According to the Montana Natural Heritage Program website, 38 animal species listed with "sensitive status" by the Bureau of Land Management (BLM) occur in Richland County. Northern Myotis, Piping Plover and Yellow-billed Cuckoo are listed as "threatened" species by BLM and occur in Richland County. Both BLM and the U.S. Fish & Wildlife Service list the Whooping Crane and the Pallid Sturgeon as Endangered; BLM also lists the Least Tern as Endangered. There are no federally-listed plants species within the project area.

**Whooping Crane**

The federally endangered Whooping Crane migrate between Canada and Texas. They occasionally cross the eastern portion of Montana, although their main migratory corridor is found to the east in the Dakotas. While the species was close to extinction during the early and mid-1900s, intensive management has helped to begin the recovery process. The species is still very rare across its range and at risk of extinction. Whooping Crane has a verified occurrence in Richland County.

### ***Least Tern***

The Least Tern prefers unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana; specifically, the Yellowstone River and the Missouri River systems.

### ***Pallid Sturgeon***

The Pallid Sturgeon is currently listed as “At High Risk” in Montana due to extremely limited and/or rapidly declining population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state. The pallid sturgeon is one of the rarest fishes in North America and was federally listed as endangered in 1990. The Pallid Sturgeon has been declining during at least the past 50 years with only about 200 adults remaining in the upper Missouri River and limited natural reproduction.

*Determination:* The groundwater development is not expected to have significant impacts.

**Wetlands** - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

According to the National Wetlands Inventory website, there are no wetlands in or near the proposed place of use and point of diversion.

*Determination:* No significant impacts.

**Ponds** - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

*Determination:* Not applicable.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to the USDA Web Soil Survey, three soil units occur in the places of use. The two tanks in NWSWNE, Sec 20, T20N, R60E are predominantly Lambert-Dimyaw silty clay loam positioned near hilltop with a range of 15 -65% slope. It is shallow, well-drained, very slightly to moderately saline (2-8 mmhos/cm), with moderately high erosion hazard and medium potential for compaction. The one tank in SWSWSE Sec 20, T20N, R60E occurs in Shambo loam on 2-4% slope, deep loam and well-drained with low runoff class and nonsaline. It is positioned in the terrace of a tributary to Shadwell Creek. Two tanks in NENWSE Sec 29, T20N, R60E occur in Cherry silty clay loam, also on stream terrace of a tributary to Shadwell Creek. Cherry silty clay loam is deep and well-drained, nonsaline to slightly saline (0-3 mmhos/cm).

The addition of two stock tanks would enable the applicant to rotate the livestock more effectively, thus improving range condition and soil health. No permanent degradation to soil quality, stability or moisture content is anticipated.

*Determination:* No significant impacts.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

According to soil survey, the places of use expect a range production ranging from 817 pounds per acre per year in Lambert-Dimyaw complex to 1,500 in Shambo loam and Cherry silty loam in a normal year. This level of forage productivity is adequate to support the applicant's stocking rate. While traffic around the stock tanks invites weed invasion, it is not expected to exceed what normally occurs in cattle-concentrated area.

*Determination:* No significant impacts.

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

A normal amount of dust is expected with cattle movement. However, it should not present a risk to vegetation or animals. Additional stock tanks will also help spread out cattle, improve vegetation cover and reduce soil erosion, all of which benefit air quality.

*Determination:* No significant impacts.

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

**Determination:** NA-Project not located on State or Federal Lands.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

*Determination:* No additional impacts on other environmental resources were identified.

## **HUMAN ENVIRONMENT**

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

*Determination:* There are no known local environmental plans or goals in the area.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

*Determination:* The project is located in rural, private land that has historically been used for livestock. It will not have an impact on recreation or wilderness activities.

**HUMAN HEALTH** - Assess whether the proposed project impacts on human health.

*Determination:* This project will have no impact on human health.

**PRIVATE PROPERTY** - Assess whether there are any government regulatory impacts on private property rights.

Yes\_\_\_ No X If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

*Determination:* There are no additional governmental regulatory impacts on private property rights associated with this application.

**OTHER HUMAN ENVIRONMENTAL ISSUES** - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

*Impacts on:*

- (a) Cultural uniqueness and diversity? No significant impact
- (b) Local and state tax base and tax revenues? No significant impact
- (c) Existing land uses? No significant impact
- (d) Quantity and distribution of employment? No significant impact
- (e) Distribution and density of population and housing? No significant impact
- (f) Demands for government services? No significant impact
- (g) Industrial and commercial activity? No significant impact
- (h) Utilities? No significant impact
- (i) Transportation? No significant impact
- (j) Safety? No significant impact
- (k) Other appropriate social and economic circumstances? No significant impact

**2. *Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. ***Describe any mitigation/stipulation measures:*** N/A
4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identifies a no-action alternative to the addition of two stock tanks. This alternative would not have any direct impacts that are typically associated with livestock drinking. The no-action alternative would not allow the Applicants to meet the purpose of grazing management.

### ***PART III. Conclusion***

1. ***Preferred Alternative:*** Issue a water use permit if the Applicants prove the criteria in §85-2-311, MCA are met.

### ***2 Comments and Responses***

4. ***Finding:***  
*Yes\_\_\_ No\_X\_ Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:* No significant impacts have been identified; therefore, an EIS is not necessary.

*Name of person(s) responsible for preparation of EA:*

*Name:* Lih-An Yang

*Title:* Water Resource Specialist

*Date:* February 1, 2023